#9

<110> Stuart A. Newman, et al.

<120> SPLICE CHOICE ANTAGONISTS AS THERAPEUTIC AGENTS

<130> 51230-00601

<140> 09/849,967

<141> 2001-05-08

<160> 4

<210> 1
<211> 1689
<212> DNA
<213> Chicken

<220>
<223> SEQ ID NO:1 Full length cDNA for chicken hnRNP A1

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<210> 2
<211> 378
<212> PRT
<213> Chicken

<220>
<223> SEQ ID NO:2 Amino acid sequence of chicken hnRNP A1

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Arg Lys Leu Phe Ile Gly Gly Leu Ser Phe Glu Thr Thr Asp Asp Ser
        35                  40                  45
Leu Arg Glu His Phe Glu Lys Trp Gly Thr Leu Thr Asp Cys Val Val
    50                  55                  60
Met Arg Asp Pro Gln Thr Lys Arg Ser Arg Gly Phe Gly Phe Val Thr
65                  70                  75                  80
Tyr Ser Cys Val Glu Glu Val Asp Ala Ala Met Ser Ala Arg Pro His
                85                  90                  95
Lys Val Asp Gly Arg Val Val Glu Pro Lys Arg Ala Val Ser Arg Glu
            100                 105                 110
Asp Ser Val Lys Pro Gly Ala His Leu Thr Val Lys Lys Ile Phe Val
        115                 120                 125
Gly Gly Ile Lys Glu Asp Thr Glu Glu Tyr Asn Leu Arg Gly Tyr Phe
    130                 135                 140
Glu Thr Tyr Gly Lys Ile Glu Thr Ile Glu Val Met Glu Asp Arg Gln
145                 150                 155                 160
Ser Gly Lys Lys Arg Gly Phe Ala Phe Val Thr Phe Asp Asp His Asp
                165                 170                 175
Thr Val Asp Lys Ile Val Val Gln Lys Tyr His Thr Ile Asn Gly His
            180                 185                 190
Asn Cys Glu Asp Lys Lys Ala Leu Ser Lys Gln Glu Met Gln Thr Ala
        195                 200                 205
Ser Ser Gln Arg Gly Arg Gly Gly Gly Ser Gly Asn Phe Met Gly Arg
    210                 215                 220
Gly Asn Phe Gly Gly Gly Gly Gly Asn Phe Gly Arg Gly Gly Asn Phe
225                 230                 235                 240
Gly Gly Arg Gly Gly Tyr Gly Gly Gly Gly Gly Gly Gly Gly Ser Arg
                245                 250                 255
Gly Ser Phe Gly Gly Gly Asp Gly Tyr Asn Gly Phe Gly Asp Gly Gly
            260                 265                 270
Asn Tyr Gly Gly Gly Pro Gly Tyr Gly Ser Arg Gly Gly Tyr Gly Gly
        275                 280                 285
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    290                 295                 300
Gly Gly Gly Tyr Gly Gly Tyr Asn Glu Gly Gly Asn Phe Gly Gly Gly
305                 310                 315                 320
Asn Tyr Gly Gly Ser Gly Asn Tyr Asn Asp Phe Gly Asn Tyr Ser Gly
                325                 330                 335
Gln Gln Gln Ser Asn Tyr Gly Pro Met Lys Gly Gly Gly Ser Phe Gly
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        355                 360                 365
Gly Ser Gly Gly Tyr Gly Gly Arg Arg Phe
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<210>     3
<211>     314
<212>     PRT
<213>     Human

<220>
<223>     SEQ ID NO:3 Amino acid sequence of human hnRNP A1

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Thr Leu Thr Asp Cys Val Val Met Arg Asp Pro Asn Thr Lys Arg Ser
        35                  40                  45
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65                  70                  75                  80
Lys Arg Ala Val Ser Arg Glu Asp Ser Gln Arg Pro Gly Ala His Leu
                85                  90                  95
Thr Val Lys Lys Ile Phe Val Gly Gly Ile Lys Glu Asp Thr Glu Glu
            100                 105                 110
His His Leu Arg Asp Tyr Phe Glu Gln Tyr Gly Lys Ile Glu Val Ile
        115                 120                 125
Glu Ile Met Thr Asp Arg Gly Ser Gly Lys Lys Arg Gly Phe Ala Phe
    130                 135                 140
Val Thr Phe Asp Asp His Asp Ser Val Asp Lys Ile Val Ile Gln Lys
145                 150                 155                 160
Tyr His Thr Val Asn Gly His Asn Cys Glu Val Arg Lys Ala Leu Ser
                165                 170                 175
Lys Gln Glu Met Ala Ser Ala Ser Ser Ser Gln Arg Gly Arg Ser Gly
            180                 185                 190
Ser Gly Asn Phe Gly Gly Gly Arg Gly Gly Gly Phe Gly Gly Asn Asp
        195                 200                 205
Asn Phe Gly Arg Gly Gly Asn Phe Ser Gly Arg Gly Gly Phe Gly Gly
    210                 215                 220
Ser Arg Gly Gly Gly Gly Tyr Gly Gly Ser Gly Asp Gly Tyr Asn Gly
225                 230                 235                 240
Phe Gly Asn Asp Gly Ser Asn Phe Gly Gly Gly Gly Ser Tyr Asn Asp
                245                 250                 255
Phe Gly Asn Tyr Asn Asn Gln Ser Ser Asn Phe Gly Pro Met Lys Gly
            260                 265                 270
Gly Asn Phe Gly Gly Arg Ser Ser Gly Pro Tyr Gly Gly Gly Gly Gln
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Tyr Phe Ala Lys Pro Arg Asn Gln Gly Gly Tyr Gly Gly Ser Ser Ser
    290                 295                 300
Ser Ser Ser Tyr Gly Ser Gly Arg Arg Phe
305                 310
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<210> 4
<211> 1136
<212> DNA
<213> Chicken

<220>
<223> SEQ ID NO:4 Open reading frame of cDNA for chicken hnRNP A1

<400> 4

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aagtggaaag aaaagaggct tcgcttttgt aacttttgat gatcacgata cagttgataa 540
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